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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,076	08/06/2001	Yoji Taniguchi	1324.65736	1481

7590

08/28/2003

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EXAMINER

RAO, SHRINIVAS H

ART UNIT PAPER NUMBER

2814

DATE MAILED: 08/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/923,076	TANIGUCHI ET AL.	
	Examiner	Art Unit	
	Steven H. Rao	2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s) _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Receipt is acknowledged of paper submitted under 35 U.S.C. 119(a)-(d), claiming priority from Japanese Patent Publication No. 2000-356218 filed on November 22, 2000 which papers have been placed of record in the file.

Abstract

The abstract should be in narrative form and generally limited to a single paragraph within the range of 50 to 150 words. Currently the Abstract exceeds 150 words (approx is about 20 lines) .

Appropriate correction is required.

Drawings

Figures 21-25 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 to 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuo. (U.S. Patent No. 6,424,397, herein after Kuo).

With respect to claim 1, Kuo describes a common electrode substrate including :
a transparent insulating substrate (Kuo figure 4E, 402) to be arranged opposite to an array substrate (Kuo fig. 4E # 400) having pixel electrodes formed in respective pixel regions that are defined by a plurality of gate bus lines and drain bus lines, (Kuo col.8 lines 30 to 40) and to hold a liquid crystal having negative dielectric anisotropy; a common electrode formed on the transparent insulating substrate;(Kuo figures 1 a , b 4E) alignment regulating structures(Kuo figs. 1A,B) having linear protrusions formed on the common electrode; (Kuo figure 4E, 414, 418) and a light shield film (Kuo fig.4E 410) formed on the transparent insulating substrate and having overlap regions that overlap the pixel electrodes when viewed in a direction perpendicular to a surface of the transparent insulating substrate so as to shield, from light, (Kuo figure 4E) alignment

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defective regions of the liquid crystal formed in regions of end portions of the pixel electrodes. (Kuo fig. 1B).

With respect to claim 2, Kuo describes the common electrode substrate according to claim 1, wherein the light shield film has the overlap regions extending along the drain bus lines, when viewed in the direction perpendicular to the surface of the transparent insulating substrate. (Kuo Figure 5E).

With respect to claim 3 Kuo describes the common electrode substrate according to claim 2, wherein a width of the overlap regions is greater than or equal to 2 μm and smaller than or equal to 12 μm when viewed in the direction perpendicular to the surface of the transparent insulating substrate. (Kuo Table 1, cols. 9 and 10).

With respect to claim 4 Kuo describes the common electrode substrate according to claim 1, wherein: the alignment regulating structures further have auxiliary protrusions that branch off the linear protrusions and extend along portions of the drain bus lines that are opposed to end portions of the pixel electrodes; (Kim fig.5 D 418) and the light shield film has the overlap regions in regions where the auxiliary protrusions are not formed, when viewed in the direction perpendicular to the surface of the transparent insulating substrate . (Kim 5 D).

With respect to claim 5 Kuo describes the common electrode substrate according to claim 1, wherein the light shield film is formed outside each of the pixel

electrodes in normal alignment regions other than the alignment defective regions of the liquid crystal, when viewed in the direction perpendicular to the surface of the transparent insulating substrate. (Kuo fig. 8 B,C).

With respect to claim 6, Kuo describes the common electrode substrate according to claim 5, wherein the light shield film is formed outside each of the pixel electrodes so as to extend along the drain bus lines, when viewed in the direction perpendicular to the surface of the transparent insulating substrate. (Kou fig. 9 G)

With respect to claim 7 Kuo describes the common electrode substrate according to claim 6, wherein a distance between end portions of the light shield film and end portions of each of the pixel electrodes in the normal alignment regions of the liquid crystal is smaller than or equal to 7 μm , when viewed parallel with the surface of the transparent insulating substrate. (Kuo col. 9).

With respect to claim 8 Kuo describes the common electrode substrate according to claim 5, wherein: the alignment regulating structures further have auxiliary protrusions that branch off the protrusions and extend along portions of the drain bus lines that are opposed to end portions of the pixel electrodes; and the light shield film is formed outside each of the pixel electrodes in regions where the auxiliary protrusions

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are formed when viewed in the direction perpendicular to the surface of the transparent insulating substrate. (Kuo figure 8 C).

With respect to claim 9 Kuo describes a common electrode substrate comprising: a transparent insulating substrate to be arranged opposite to an array substrate having pixel electrodes formed in respective pixel regions that are defined by a plurality of gate bus lines and drain bus lines, and to hold a liquid crystal having negative dielectric anisotropy; a common electrode formed on the transparent insulating substrate; alignment regulating structures having linear protrusions formed on the common electrode; and a light shield film formed on the transparent insulating substrate outside each of the pixel electrodes in normal alignment regions other than alignment defective regions of the liquid crystal when viewed in a direction perpendicular to a surface of the transparent insulating substrate. (rejected for reasons stated under claims 1 and 7 above).

With respect to claim 10 Kuo describes the common electrode substrate according to claim 9, wherein the light shield film is formed outside each of the pixel electrodes so as to extend along the drain bus lines when viewed in the direction perpendicular to the surface of the transparent insulating substrate. (Kuo figure 10 C,D).

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With respect to claim 11. Kuo describes the common electrode substrate according to claim 9, wherein: the alignment regulating structures further have auxiliary - protrusions that branch off the linear protrusions and extend along portions of the drain bus lines that are opposed to end - portions of the pixel electrodes; and the light shield film is formed outside each of the pixel electrodes in regions where the auxiliary protrusions are formed when viewed in the direction perpendicular to the surface of the transparent insulating substrate. (repeats limitations of claim 4 and rejected for reasons stated above).

With respect to claim 12. Kuo describes the common electrode substrate according to claim 1, wherein the light shield film is formed by laminating, one on another, forming materials of color filters that are formed in the respective pixel regions. (Kuo figure 4E, col. 8 line 40 , also well known in the art).

With respect to claim 13. Kuo describes a common electrode substrate comprising: a transparent insulating substrate to be arranged opposite to an array substrate having pixel electrodes formed in respective pixel regions that are defined by a plurality of gate bus lines and drain bus lines, and to hold a liquid crystal having negative dielectric anisotropy; a common electrode formed on the transparent insulating substrate and having steps for alignment-restricting the liquid crystal in regions opposed to regions between each of the pixel electrodes and the drain bus lines; and alignment

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regulating structures having linear protrusions formed on the common electrode.(
rejected for same reasons as claim 1 above and steps figure 7).

With respect to claim 14 Kuo describes the common electrode substrate according to claim 13, wherein the steps are formed thicker than the regions that are opposed to the respective pixel electrodes. (Kuo figure 7E)

With respect to claim 15. Kuo describes the common electrode substrate according to claim 13, wherein: the alignment regulating structures further have auxiliary protrusions that branch off the linear protrusions and extend along portions of the drain bus lines that are opposed to end portions of the pixel electrodes; and the steps are formed in regions where the auxiliary protrusions are not formed. (repeats claims 4, 11 and Kuo 5D etc.).

With respect to claim 16. Kuo describes the common electrode substrate according to claim 13, wherein each of the steps is formed in such a manner that a resin is formed under the common electrode. (Kuo figure 9 D).

With respect to claim 17 Kuo describes the common electrode substrate according to claim 16, wherein each of the steps is formed in such a manner that forming materials of color filters formed in the respective pixel regions are laminated one on another. (Kuo figure 4E, col. 8 line 40 , also well known in the art).

With respect to claim 18 Kuo describes the common electrode substrate according to claim 16, wherein each of the steps is made of a black resin. (Kuo col. 14 line 67, claim 37).

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With respect to claim 19 Kuo describes the common electrode substrate according to claim 1, wherein the linear protrusions are formed obliquely with respect to edges of the pixel electrodes. (Kuo figure 10 F).

With respect to claim 20 Kuo describes a liquid crystal display device comprising an array substrate having pixel electrodes formed in respective pixel regions that are defined by a plurality of gate bus lines and drain bus lines, an opposite substrate arranged opposite to the array substrate, and a liquid crystal having negative dielectric anisotropy sealed between the array substrate and the opposite substrate; wherein the opposite substrate is the common electrode substrate as set forth in claim 1.(rejected for the reasons set out under claim 1 above and LCD- Kuo title, etc.).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven H. Rao whose telephone number is (703) 3065945. The examiner can normally be reached on 8.00 to 5.00.

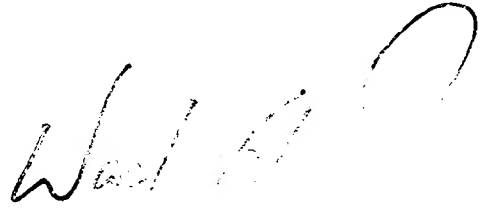
The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 3067722.

Steven H. Rao

Patent Examiner

August 13, 2003.


SUPERVISOR
TECHNICAL STAFF